

# AMERICAN MUSEUM NOVITATES

Number 872

Published by  
THE AMERICAN MUSEUM OF NATURAL HISTORY  
New York City

July 10, 1936

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## RESULTS OF THE ARCHBOLD EXPEDITIONS. NO. 11

### *MELIPHAGA ANALOGA* AND ITS ALLIES

BY A. L. RAND

This is a group of very similar, closely related honey eaters. The large number of forms and the lack of adequate material has retarded their proper understanding. The first important step in understanding the group was Stresemann's review in 1925 (*Jour. f. Ornith.*, LXXIII, pp. 255-260). Ten forms, included in four species, were recognized. The next important paper was by Paludan in 1934 (*Ornith. Monatsber.*, XLII, pp. 140-143) in which six species containing thirteen forms were recognized.

Much more material than has hitherto been available is now at hand in The American Museum of Natural History, including the material in the Rothschild collection, the material collected for the American Museum by Rollo Beck in northeast New Guinea in 1928 and 1929, the specimens collected by Hannibal Hamlin of the Whitney South Sea Expedition in southeast New Guinea in 1929, and the collections made in south and southeast New Guinea by Richard Archbold and A. L. Rand in 1933-1934.

For additional material I am indebted to Dr. Erwin Stresemann who kindly loaned me the specimens in the Berlin Museum and to Mr. J. L. Peters of the Museum of Comparative Zoölogy for the loan of material from that institution. Dr. E. Mayr has given me the benefit of his advice and experience in preparing this paper.

An examination of the present material shows that there are more species than have been recognized and that there are a number of undescribed races. In the following pages I recognize nine species which include twenty-six forms.

I have tried to make the following key so that the New Guinea species can be identified by it. A key is difficult to construct, as many of the characters are slight and comparative. Sometimes the races of two species in one area are very different, while in another area the two species are represented by forms that are much more similar to one another. Different races of the same species sometimes go into different sections

of the key. It must be kept in mind that old specimens discolor badly with age, "foxing" or becoming very brownish.

However, the following key will prove useful in identifying species, I think, and the range of the forms will assist in eliminating possibilities.

#### KEY TO NEW GUINEA FORMS

- 1.—Inner edge of remiges tinged ochraceous, wing, male, over 81, female, over 77 . . . 2.  
     Inner edge of remiges whitish or yellowish tinged, as large as or smaller than the above . . . . . 3.
- 2.—Auriculars white, under parts spotted or not spotted . . . . . *montana*.  
     Auriculars yellow, under parts spotted . . . . . *mimikae*.
- 3.—Auriculars white.  
     *montana* (races *auga*<sup>1</sup> and *setekwa*) and *analoga* (var. *albonotata*).  
     Auriculars yellow . . . . . 4.
- 4.—Bill relatively short and stout (male, 13–16), rump-tuft very dense, stiff, dark, edged with silvery white; wing, male, 84–95 . . . . . *aruensis*.  
     Bill more slender, rump-tuft not like above, size as large or smaller . . . . . 5.
- 5.—Under parts conspicuously spotted; (pronounced only in typical race), wing, male, 73–79 . . . . . *orientalis*.  
     Under parts not so, size variable . . . . . 6.
- 6.—Conspicuous yellow rictal spot, forehead brighter green than back, chin and throat conspicuously washed with yellow; wing, male, 77–82 . . . . . *flavirictus*.  
     Not so, size variable . . . . . 7.
- 7.—Size large (wing, 88–96); bill elongated (male, 18–19), forehead extensively gray, under wing-coverts ochraceous . . . . . *vicina*.  
     Size smaller (wing, below 88); bill usually shorter (below 18, except in *M. a. longirostris*, with bill, 16.5–19, wing, 82–85), forehead and under wing-coverts variable . . . . . 8.
- 8.—Size small (male wing, 71–75; bill, 13.5–15), forehead green, gray restricted to lores, under wing-coverts yellowish, light gray under parts without an indication of streaking . . . . . *gracilis gracilis*.<sup>2</sup>  
     Without the combination of above characters . . . . . 9.
- 9.—Under wing-coverts ochraceous, male wing, 74–81 . . . . . 10.  
     Under wing-coverts yellowish, size variable . . . . . 11.
- 10.—Bill more slender especially at base, darker gray below, with an indication of streaking, little black in face . . . . . *orientalis facialis*.  
     Bill more laterally expanded at base, without an indication of streaking below, more black in face . . . . . *gracilis*, races *stevensi* and *cinereifrons*.
- 11.—Size smaller; male wing, 73–80; bill more slender; darker under parts with an indication of spotting; forehead gray, less of a dark subterminal band in rump-tuft . . . . . *orientalis becki*.  
     Size larger, male wing 78–88, bill stouter, under parts paler, washed with yellow in one race, without spotting, forehead green, denser rump-tuft with a more distinct subterminal dark band . . . . . *analoga*.

<sup>1</sup> The young of *auga*, however, has yellow auriculars.

<sup>2</sup> The *gracilis* from Aru Islands have a slightly longer bill.

The honey eaters included in this group are so similar in general coloration and pattern that I have thought it not worth while to give a detailed color description of each species but to mention briefly the characters that vary with the different species. Where one species closely resembles another, or one race of another species, I have discussed the differences under the specific heading. These are small to medium-sized honey-eaters, olive-green to brownish above, with or without gray foreheads. The rump-tuft is tipped with olive, but the shade of the gray bases of the feathers, the denseness of the tuft, and the light edging vary. There is a yellow or whitish rictal spot and yellow or white auriculars; a dark area about the eye and a postocular stripe varies from black to olive tinged blackish, little darker than the back. The under parts are gray, usually washed with yellow, and may be streaked or unstreaked, the under wing-coverts and inner edges of the remiges are yellowish white to ochraceous.

In the following, measurements are expressed in millimeters and are taken in this manner: wing, by straightening it against a ruler; tail, with dividers, the measurement being from the insertion of the central pair of tail feathers to the tip of the longest tail feather; bill, with dividers, measured from the anterior edge of the lateral feathering to the tip.

***Meliphaga mimikae* (Ogilvie-Grant)**

The bill is fairly stout, forehead more or less tinged with dark gray, upper parts dark olive-green, feathers of rump-tuft fairly dense but soft, gray with but a slightly darker subterminal area, yellowish-white rictal spot very much reduced, auriculars yellow, dark areas in face blackish olive, under parts dark gray, the feathers edged with yellowish more abundantly and lighter in color on the abdomen, giving a scaled or spotted appearance, under wing-coverts ochraceous buff, inner edges of remiges more or less tinged with ochraceous.

This species is rather distinct. In the spotting of the under parts it is approached only by the most heavily marked race of *orientalis* from which the larger size and heavier bill easily separate it, and *M. montana huonensis* from which it may be told by the yellow, not white auriculars.

This species was considered a form of *montana* by Paludan, but as both this species and *montana* occur together in the Snow Mountain and southeast New Guinea, *mimikae* must be considered a species.

**Meliphaga mimikae mimikae** (Ogilvie-Grant)

*Ptilotis mimikae* OGILVIE-GRANT, 1911, Bull. Brit. Ornith. Club, XXIX, p. 27: Mimika River.

	MALE ADULT	FEMALE ADULT
Wing	87, 88 (82, 85, 87, 88, 89) <sup>1</sup>	80, 80, 80, (78, 84) <sup>1</sup>
Tail	.., 74	65, 65, 67
Bill	15, 16	13, 13.5

**MATERIAL.**—Snow Mountains (3000 feet) and Upper Setekwa River, 2 males, 3 females, 2 imm.

**RANGE.**—The southern slopes of the Snow Mountains (from sea level to 2500 ft., Ogilvie-Grant, 1915, Ibis, Jub. sup., p. 68).

**Meliphaga mimikae granti**, new subspecies

**TYPE.**—No. 421092, American Museum Natural History; male ad.; Mafulu, alt. 1250 meters, Central Division, Territory of Papua; November 11, 1933; Richard Archbold and A. L. Rand.

**DIAGNOSIS.**—Differs from typical *mimikae* of the Snow Mountains in the more clear green, less citrine color of the upper parts, the more pronounced gray on the forehead, the darker under parts with the mottling more pronounced, and the larger size.

	MALE ADULT	FEMALE ADULT
Wing	90, 91, 95	82, 83, 84, 87
Tail	74, .., ..	69, 70, 70, 72
Bill	15, 16, 16	14.5, 15, 15, 15

**MATERIAL.**—Mafulu, 2 males, 4 females; head of the Aroa River, 1 male; Hydrographer Range, 1 female imm.

**DISTRIBUTION.**—The mountains of southeast New Guinea, probably above 800 meters; secured by Archbold and Rand only at 1250 meters.

**REMARKS.**—This is a very distinct race. Ogilvie-Grant (1915, Ibis, Jub. sup., p. 68) first pointed out that this form occurred in southeast New Guinea (the specimen Rothschild and Hartert recorded in 1907, Nov. Zool., p. 482) and noted its larger size. Though the Snow Mountain birds before us were collected in 1910, and may have foxed considerably, we have also the specimen from southeast New Guinea mentioned above, collected in 1905, and it agrees well with the other southeast New Guinea birds.

**Meliphaga montana** (Salvadori)

This species shows the most geographical variation of any in this group. Because of this, it is difficult to formulate a specific diagnosis.

<sup>1</sup> Measurements from the series in the British Museum made by Dr. Ernst Mayr.



The bill is rather stout, but varies from 14 to 17 mm. in length, the upper parts vary from rather clear olive-green with a slightly grayish forehead (*auga*) to dark brownish-olive with a blackish head and dark gray-tinged forehead. The rump-tuft is moderately dense and soft, gray, with only a slightly darker subterminal area whitish, rictal spot much reduced, auriculars white, except in the Arfak Peninsula population of *montana* which has them stained yellowish, and the young of *auga* which has them yellow. The under parts vary from rather light gray washed with olive-yellow on the breast, unstreaked (*auga*), to rather dark gray, the feathers with light edges giving a streaked appearance (*steini*); one form has a brownish-olive area on each side of the breast (*germanorum*), another has the under parts heavily washed with yellowish (*aicora*), and another has the under parts yellowish and rather definitely streaked (*huonensis*). The inner edges of the remiges are strongly tinged with ochraceous, except in *auga* which has them yellowish white, and *setekwa* which has them only lightly tinged ochraceous. The white auriculars, the thick bill and the structure of the rump-tuft appear to be the only specific characters. The white auriculars serve to distinguish all *montana* (but the young of *auga*) from all the other species except the *albonotata* variety of *analoga*. The *albonotata* variety of *analoga* can be confused only with *auga*, as all the other races can be distinguished on the basis of the coloration of the underwing.

Some specimens of *albonotata* (see under *analoga* for a discussion of *albonotata*) have a more slender bill, the general color of the upper parts is much more citrine-olive, and the tail averages shorter, (*albonotata* male 68-70, female 67-68; *auga* male 69-75, female 67-68).

The young of *auga* are very similar to *analoga* but may be easily distinguished by the shorter, stouter bill. The species *montana* was considered to include *mimikae* as one of its races by Paludan, but they are two different species as both occur in the same area.

This species appears to be spread over all the mountains of New Guinea; Paludan (*op. cit.*) gives its vertical range as 200 to 1500 meters. The series of more or less connecting subspecies seems to run from south-east New Guinea *auga* and the Snow Mountains *setekwa* to *montana* of the Arfak Peninsula, then the Weyland Mountain population which is intermediate between *montana* and *sepik*. *M. m. sepik* is close to *steini*, which is still farther away from *montana*, and *germanorum* is the extreme in this series with gray under parts and dark upper parts. With the Saruwaged birds (*huonensis*) a different character is pronounced, the scaly or spotted appearance below; the tail is longer and the yellow of

the under parts becomes more pronounced, while *aicora* has the most yellow under parts and the longest bill of any race. This example of races from the north and the south of southeast New Guinea being very different contrasts with the case of *aruensis*.

***Meliphaga montana auga*, new subspecies**

TYPE.—No. 421337, American Museum Natural History; male ad.; Mafulu, alt. 1250 meters, Central Division, Territory of Papua; November 3, 1933; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Differs from *montana* in its much lighter coloration, the grayish-green not citrine-green upper parts, the clearer green, not citrine-green outer edges to the remiges, the much paler under parts, and the paler, whitish yellow, not ochraceous inner edges to the remiges. There is hardly an indication of mottling on the under parts.

	MALE ADULT	FEMALE ADULT
Wing	83, 87, 87, 87, 88, 89	75, 78, 81
Tail	69, 71, . . , 75, 75, 75	. . , 67, 68
Bill	15, 15, 15, . . , 15, 15	14, 14, . .

MATERIAL.—Bella Vista, 2 males; Mafulu, 4 males, 3 females, 3 imm.

RANGE.—The southern slopes of the mountains of southeast New Guinea, collected between 1200 and 1450 meters.

REMARKS.—This is a very distinct race and is the lightest of all the races of *montana*. The young of this race (2 young from a nest, with parents, and an immature bird) have yellow auriculars, but in the adult these are apparently always white. The young, with their yellow auriculars, somewhat resemble *analoga* from southeast New Guinea but are easily distinguished by the shorter, stouter, less curved bill and the darker, more brownish-olive upper parts.

***Meliphaga montana setekwa*, new subspecies**

TYPE.—No. 448978, American Museum Natural History; female ad.; Upper Setekwa River, Dutch New Guinea; July 12, 1910; A. S. Meek.

DIAGNOSIS.—Distinguished from all the races of *montana* except *auga* by the buffy-tinged yellowish not deep ochraceous inner edges of the remiges. From *auga* it is distinguished by the more ochraceous under wing-coverts, the conspicuously brownish-olive upper parts and the darker under parts with a distinct brownish-olive wash on the breast.

	FEMALE
Wing	77, 78
Tail	64, 64
Bill	14, 15

**MATERIAL.**—Upper Setekwa River, 2 females ad.

**RANGE.**—Known only from the southern Snow Mountains.

**REMARKS.**—Part of the brownish-olive color of the upper parts may be due to fading or "foxing," but this is not the case with the olive-brown on the breast. This form appears to be somewhat intermediate between *auga* and *montana*, but is much closer to the former.

***Meliphaga montana montana* (Salvadori)**

*Ptilotis montana* SALVADORI, 1880, Ann. Mus. Civ. Gen., XVI, p. 77; Arfak Mts.

	MALE ADULT	FEMALE ADULT
Wing	88, 89, 90	77, 79, 82, 82, 83
Tail	72, 72, 73	63, 67, 65, 67, 65
Bill	15, 15, 15	15, 15, 14, 15, 15

**MATERIAL.**—Kapaur, 1 male (= female ?); Arfak Mts. (Siwi), 2 males; Weyland Mts., 2 males, 5 females.

**DISTRIBUTION.**—Arfak Peninsula and Weyland Mountains, recorded between 800 and 1500 meters in the Arfak Mts. and at 300 meters in the Weyland Mts.

**REMARKS.**—The Weyland Mountain birds are somewhat intermediate between the Arfak *montana* and *sepik* but they are much closer to the Arfak birds and must be included with them. They are slightly darker more brownish above more blackish on the head and grayer below than Arfak birds. The ear-coverts are slightly stained with yellow in the Arfak specimens. A first-year bird from the Weyland Mountains also has the ear-coverts stained yellowish. The Kapaur bird agrees very well with the Siwi specimens in color, allowing for a certain amount of "foxing," as it was collected in 1894. It has a wing of 86 but a bill of only 14 mm.

***Meliphaga montana sepik*, new subspecies**

**TYPE.**—No. 448977, American Museum Natural History; male ad.; Hunstein-spitze, Sepik District, New Guinea; March 2, 1913; Dr. Bùrgers.

**DIAGNOSIS.**—Differs from *montana* in the less olive-yellow-tinged under parts, the darker olive-green less citrine-green upper parts and the much darker, more blackish top and sides of the head.

	MALE	FEMALE
Wing	81, 85, 85, 86, 87, 88, 89, 89	80, 81, 82
Tail	68, 70, 68, 69, 68, 73, 70, 71	65, 66, 67
Bill	15, 14, 15, 15, 15, 15, 15, 15.5	15, 15, 15

**MATERIAL.**—Hunstein-spitze, Sepik District, 8 males, 3 females.

**DISTRIBUTION.**—Known only from the mountains of the Upper Sepik River, from 800 to 1500 meters.

REMARKS.—This race is very different from typical *montana* from Arfak and is closer to *steini*.

***Meliphaga montana steini* Stresemann and Paludan**

*Meliphaga montana steini* STRESEMANN AND PALUDAN, 1932, Nov. Zool., XXX-VIII, p. 222: Jobi.

	MALE ADULT
Wing	87
Tail	70
Bill	16

MATERIAL.—The type from Jobi.

DISTRIBUTION.—Known from the Island of Jobi at 850 meters.

REMARKS.—This race, known only from the type, is close to *sepik* but differs in the much more clear gray under parts, lacking the yellowish wash of *sepik* and *montana*; the upper parts are darker, much more greenish olive, less yellowish olive, the top and sides of the head are darker, more blackish than in *montana*. The upper parts are similar in tone to *sepik* but lighter.

***Meliphaga montana germanorum* Hartert**

*Meliphaga montana germanorum* HARTERT, 1930, Nov. Zool., XXXVI, p. 47: Cyclops Mountains.

	MALE ADULT
Wing	89
Tail	71
Bill	16

MATERIAL.—The type from the Cyclop Mountains.

DISTRIBUTION.—Known only from the type from the Cyclop Mountains.

REMARKS.—This form appears to represent the extreme of the series *montana*, *sepik*, *steini*, and *germanorum*; below it has very little yellowish wash and is darker gray than *steini*. It has a pronounced brownish wash on the sides of the breast. The upper parts are considerably darker and more brownish than in *steini* or *sepik*.

***Meliphaga montana huonensis*, new subspecies**

TYPE.—No. 30.2619, Zoolog. Museum, Berlin; male adult; Junzaing, Huon Peninsula, New Guinea; February 20 to March 20, 1929; Ernst Mayr.

DIAGNOSIS.—This race has the upper parts somewhat darker than typical *montana*. The distinguishing characters are the spotted or scaly appearance of the under parts, due to the darker centers and yellowish-olive edges of the feathers, which is most pronounced on the belly, and the average longer tail.



	MALE	FEMALE
Wing	88, 89, 90, 91	85, 87
Tail	72, 75, 75, 78	.., 75
Bill	16, 16.5, 16, 14.5	.., 17.5

MATERIAL.—Junzaing, 3 males; Sattelberg, 2 males, 1 female.

DISTRIBUTION.—Probably restricted to the Huon Peninsula.

REMARKS.—This race is not an intermediate between the race to the east and that to the west but has one character, the spotting of the breast, pronounced which is only indicated in the rest of the forms. The bill in this form tends to be somewhat longer than in *montana* and *sepik*, showing an approach toward *aicora*.

***Meliphaga montana aicora*, new subspecies**

TYPE.—No. 448976, American Museum Natural History; Aicora River, Northern Division, Territory of Papua; male ad.; October 16, 1905; A. S. Meek.

DIAGNOSIS.—Differs from *montana* in the darker, more olive upper parts, the much more pronounced yellowish wash on the under parts, and the longer bill. The under parts have a slightly streaked appearance.

	MALE ADULT	MALE IMMATURE
Wing	91, 92	84
Tail	.., ..	71
Bill	17, 17	17

MATERIAL.—Aicora River, 3 males.

DISTRIBUTION.—Probably the mountains of the north side of south-east New Guinea.

REMARKS.—This is a very distinct race and the pronounced difference between it and the form from the south side of southeast New Guinea is surprising. Rothschild and Hartert, 1914, Nov. Zool., XXI, p. 12, have already mentioned the longer bill of these specimens and "subsp. nov." had been penciled on the label. The yellower under parts and longer bill separate it from all the other races of this species.

***Meliphaga aruensis* (Sharpe)**

This species has a short, stout bill, forehead green, at most the lores tinged with gray, rump-tuft very dense and with stiff feathers, the sub-terminal part of which is very dark brownish gray, almost black, rump-tuft conspicuously edged with silvery white, medium-sized rictal spot and auriculars yellow, the latter may or may not be elongated, depending on the subspecies; dark area in face blackish olive, under parts gray tinged with yellowish olive on throat and chest, slightly lighter and

washed with yellowish on the belly, under wing-coverts buffy yellow, inner edges of remiges yellowish white.

This is a very distinct species, easily recognized by its large size, short stout bill, yellow auriculars, and the characters of its rump-tuft. The elongated ear-tufts of the race *sharpei* will also give a good clue as to its specific identity.

In this species the Arfak and the South Snow Mountain birds are very different, and the two subspecies appear to intergrade around the eastern end of the Island, in contrast to the case in *montana*.

***Meliphaga aruensis aruensis* (Sharpe)**

*Ptilotis aruensis* SHARPE, 1884, 'Rep. Voy. "Alert," ' p. 19: Aru Islands.

	MALE ADULT	FEMALE ADULT
Wing	90, 91, 92, 92, 95	85, 86, 86
Tail	71, 75, 76, 71, 80	72, 72, 72
Bill	14, 14, 14.5, 14.5, 14	13, 13, 13

MATERIAL.—Milne Bay, 1 female; Lolorua, Galley Reach, 1 male; Kubuna, 1 male, 1 female; Mafulu, 1 female; Dogwa, 1 male; Wuroi, 1 male; Upper Setekwa River, 2 males; Aru Island (Trangan Is., Kobrur Is.); 1 male, 1 female.

DISTRIBUTION.—Aru Islands and the southern half of New Guinea, from the Setekwa River to Milne Bay and up to 1250 meters in south-east New Guinea.

REMARKS.—The birds from southeast New Guinea have the ear-tuft slightly longer than in Aru Island and Setekwa River birds, but not quite as long as the ear-tufts of Kumusi River and D'Entrecasteaux Archipelago birds. The underwing is darker than in the birds from the north of southeast New Guinea.

***Meliphaga aruensis sharpei* (Rothschild and Hartert)**

*Ptilotis aruensis sharpei* ROTHSCHILD AND HARTERT, 1903, Nov. Zool., X, p. 442: Dorey. Type examined.

This race is easily distinguished by the much elongated, not squarish auriculars.

	MALE ADULT	FEMALE ADULT
Wing	(11) 87-94 (91.3)	(11) 82-88 (85.3)
Tail	(10) 70-80 (73.4)	(10) 68-72 (70.5)
Bill	(12) 13-16 (14.6)	(10) 12.5-14 (13.5)

MATERIAL.—Batanta, 1 male, 1 female; Waigiu, 1 male, 1 female; Jobi, 1 male; Keboi, near Jobi, 1 male; Arfak, 1 male (type), 1 sex ?; Weyland Mts., 1 male, 2 females; Ifaar, 1 male; Takar, 1 sex ?; Mae-anderberg, 1 female; Keku, 1 female; Hompua, 1 male; Wau and Upper

Watut (Morobe District), 3 males, 2 females, 2 sex ?; Fergusson Is., 9 males, 6 females, 2 sex ?; Goodenough Is., 9 males, 11 females; Kiriwina Is. (Trobriands), 1 female; Kumusi River, 1 male, 1 female.

DISTRIBUTION.—The northern half of New Guinea from the Kumusi River to Arfak, the D'Entrecasteaux Archipelago, Trobriand Island, and the western Papuan Islands; ranges up to 3900 feet (about 1181 meters) in the mountains.

The Trobriand Island specimen is the first record for that locality. It was collected by the Whitney South Sea Expedition of the American Museum (H. Hamlin).

REMARKS.—The present series is not uniform throughout. The birds from the Sepik region westward all have very long ear-tufts and a rather dull, pale underwing. The birds from Arfak and the western Islands appear to have slightly smaller bills than the others; Waigiu birds are slightly grayer below. Birds from Astrolabe Bay to the Kumusi River and the D'Entrecasteaux Archipelago have the ear-tuft less elongated and the underwing (inner edges of remiges and under wing-coverts) much brighter, more yellowish white. These differences however, are too slight to be of taxonomic importance.

#### *Meliphaga notata* (Gould)

The bill in this species is rather stout and heavy, but more elongated and down-curved than in *aruensis*, much heavier than in *gracilis*. The upper parts olive-green, the darker green centers to the feathers giving a slightly streaked appearance, a gray tinge largely restricted to the lores, the rump-tuft rather dense and stiff and edged with whitish but these characters are not as pronounced as in *aruensis*, rump-feathers rather dark gray, with a darker brownish-gray subterminal band, rictal spot small, yellowish or whitish, auriculars yellow, dark area in face black, under parts gray, the feathers with lighter edgings, giving a more or less streaked or spotted appearance, inner edges of remiges yellowish white or buffy, under wing-coverts buffy or ochraceous (depending on the race).

The only other similar species in Australia is *gracilis*, which is easily distinguished by its much smaller size (wing, *gracilis* male, 73–77, *notata* male, 82–91) and the much more slender, though little shorter bill.

*M. notata* has been considered conspecific with *aruensis* and with *analoga*, but it is better kept as a distinct species as Paludan (*loc. cit.*) has done. The bill is elongated as in *analoga* but is heavier and straighter. The rump-tuft is somewhat similar to that of *analoga* and,

though it is conspicuously edged with white as in *aruensis*, it lacks the denseness, stiffness, and dark color characteristic of that species. The slight streaking above and below is rather distinctive of this species.

**Meliphaga notata notata** (Gould)

*Ptilotis notata* GOULD, 1867, Ann. and Mag. Nat. Hist., (3) XX, p. 269: Cape York.

	MALE ADULT	FEMALE ADULT
Wing	(11) 83-91 (87.3)	(7) 78-83 (79.6)
Tail	(10) 67-74 (70.7)	63, 65, 65, 67, 67
Bill	(9) 15-17 (16)	(8) 14-16 (14.6)

**MATERIAL.**—Thursday Island, 4 males, 1 female, 2 sex ?; Cape York, 3 males, 2 females; Utingu, Cape York, 7 males, 7 females; Pinkenya, Cape York, 1 male, 1 female.

**DISTRIBUTION.**—Cape York and Thursday Island.

**REMARKS.**—The Thursday Island birds are slightly more yellowish below and have the under wing-coverts slightly more buffy yellow than in the Cape York Birds.

**Meliphaga notata mixta** (Mathews)

*Ptilotis analoga mixta* MATHEWS, 1912, Nov. Zool., XVIII, p. 403: Johnstone River, Queensland. Type examined.

	MALE ADULT	FEMALE ADULT
Wing	82, 85, 88, 89, 90	80, 82, 82, 85
Tail	73, 70, 73, 72, 72	66, 69, . . . , . .
Bill	16, . . , 15, 15, 16.5	14, 14.5, 14.5, 15

**MATERIAL.**—Bartle Frere, 5 males; Bellender Ker, 1 male juv., 1 female; Kuranda, 1 male, 3 females, 1 sex ?; Cairns, 2 males, 3 females; Barron River, 3 males; Johnstone River, 1 male; Cedar Bay, 1 male; Trinity Bay, 1 sex ?.

**DISTRIBUTION.**—North Queensland in the vicinity of Cairns.

**REMARKS.**—Though Mathews did not recognize this race in his 'Systema Avium Australasianarum,' (II, p. 769) it is a perfectly distinct subspecies, distinguished by the under parts being considerably darker, the outer edges of the remiges being darker more olive-green, not brighter citrine-green, the inner edges of the remiges being tinged ochraceous, and the under wing-coverts, especially those near the bend of the wing, being ochraceous instead of buffy yellow. There are three birds from Cooktown (2 males, 1 female) which are not assignable to either *mixta* or *notata*. The outer edges of the remiges are more like those of *notata* but the color of the underwing and that of the under parts is intermediate between that of the two races. These must be considered intergrades.



**Meliphaga analoga** (Reichenbach)

The bill is elongated, upper parts olive-green, forehead green or slightly tinged gray, lores with or without gray, rump-tuft fairly dense, feathers gray with a conspicuous darker, subterminal brownish-gray band, yellow rictal spot moderately large to small, auriculars yellow, dark area in face olive, tinged blackish, under parts gray, unstreaked, strongly or faintly washed with yellow, inner edges of remiges yellowish white, under wing-coverts brighter yellowish.

The above does not apply to the variety called *albonotata* by Salvadori. Besides the white color of the ear-tufts this "variety" differs from the ordinary *analoga* in having the ear-tuft shorter, the bill stouter and broader at the base, the feathers of the head more scaly, less decomposed, the general color of the upper parts more brownish, the upper wing-coverts and the outer edges of the remiges more citrine and the under wing-coverts much more buffy, less yellowish. The measurements are about the same. These differences suggest that "*albonotata*" may be more than a color variety of *analoga*, possibly a different species, but for the present I am considering it a color-variety of *analoga*. Of the variety *albonotata* I have the following material:

Kapaur, 1 male; Amberbaki, 1 female; Manokwari, 4 males, 3 females; Weyland Mountains, 2 males, 1 female, 1 sex ?; Sattelberg (Huon Peninsula), 1 female. Stresemann and Paludan (1932, Nov. Zool., XXXVIII, p. 147) have pointed out that this color-variety is much more common in northwest New Guinea and southeast New Guinea, quoting from Salvadori for the latter locality. However, none of the present specimens from southeast New Guinea have white auriculars. Possibly its status there has changed and the *albonotata* variety is not as common there as formerly.

**Meliphaga analoga analoga** (Reichenbach)

*Ptilotis analoga* REICHENBACH, 1852, 'Handb. d. Spec. Ornith.', Meropinae, p. 103, tab. 467: Type<sup>1</sup> locality, Triton Bay.

<sup>1</sup> Mr. J. Berlioz of the Paris Museum has been kind enough to compare a pair of *Meliphaga a. analoga* and a pair of *M. g. gracilis* with the type of *Meliphaga analoga* and writes as follows about his findings:

"I received the four specimens of *Meliphaga*, which you sent to us, and I compared them with our two mounted birds called 'types' of *Ptilotis analoga*, both said ♂♂ and coming from 'New Guinea, West coast.'

"It is impossible to appreciate, on those two specimens, which are rather faded or worn, the very slight differences based on the coloration. But there can be little doubt that they belong to the larger form: the length of the wing for both is about 83 or 84 millimeters, thus only slightly shorter than in your male of *analoga*. In the best preserved of our two specimens, the bill, although slightly broken at tip, is distinctly long and slender as in your specimen; in the other one, it is certainly shorter and stouter, but I suppose the latter may be not quite fully adult, as the plumage is also somewhat more fluffy. In any case, the two specimens are certainly larger birds than your two *gracilis* specimens."

This confirms the opinion of earlier ornithologists that the name *analoga* must be applied to the larger of the two species occurring in southwest New Guinea.

*Ptilotis similis* JACQUINOT AND PUCHERAN, 1853, 'Voyage au Pole Sud,' Zool., III, p. 80 (based on same bird).

*Ptilotis albonotata* SALVADORI, 1876, Ann. Mus. Civ. Gen., IX, p. 33: Naiabui, Hall Sound, southeast New Guinea.

	MALE	FEMALE
Wing	(27) 79-88 (83.3)	(25) 73-83 (78.4)
Tail	(24) 64-75 (67.8)	(17) 61-70 (64.1)
Bill	(20) 14-16 (15.2)	(24) 13.5-16 (14.5)

**MATERIAL.**—Waigiu, 5 males, 4 females; Batanta, 1 female; Misol, 4 males, 3 females; Kapaur, 3 males, 1 female; Manokwari, Andai, Dorey, Siwi, 10 males, 5 females, 1 sex ?; Ramoi, 1 male, 1 female; Amberbaki, 1 male, 1 female; Ron Island, 2 males, 1 female; Weyland Mountains, 3 males, 4 females; Huon Peninsula (Sattelberg, Simbang), 4 males, 4 females; Cloudy Bay, 1 female; Baroka, 2 females; Kubuna, 1 female; Wuroi, 3 males, 1 female.

**DISTRIBUTION.**—Misol, Waigiu, Batanta, and New Guinea, excepting the range of *flavida* on the north coast.

**REMARKS.**—All of the population included in this race are not identical but the differences between various groups of individuals from different geographical areas are not sufficient to be used in separating races. The Waigiu birds have a shorter, paler ear-tuft, smaller rictal spot, more gray in the forehead, and slightly larger bill than Arfak specimens; the southeast and south New Guinea specimens have the general color of the upper parts more grayish green than those of the rest of New Guinea, and shorter, slightly paler ear-tufts than Arfak specimens, broader than in Waigiu specimens. The southeast New Guinea specimens also have some gray in the lores and forehead more like the Waigiu birds and have more black in the side of the head.

***Meliphaga analoga flavida* Stresemann and Paludan**

*Meliphaga analoga flavida* STRESEMANN AND PALUDAN, 1932, Nov. Zool., XXX-VIII, p. 147: Jobi Island. Type examined.

	MALE	FEMALE
Wing	(12) 78-85 (81.2)	(9) 73-78 (75.4)
Tail	(9) 66-71 (68.6)	(9) 59-66 (62.6)
Bill	(12) 14-16 (15)	(8) 13-15 (13.8)

**MATERIAL.**—Jobi Island, 6 males, 9 females; Takar, 2 males, 3 females; Tana Mera, 1 male; Cyclops Mts., 1 male; Hollandia, 1 male,

1 female, 1 sex ?; Ifaar, 2 females; Madang, 2 males, 1 female, 1 sex ?; Keku, 3 males, 3 females, 1 sex ?.

DISTRIBUTION.—Jobi Island and the mainland of New Guinea, probably from Geelvink Bay to Astrolabe Bay.

REMARKS.—This race is characterized by the more pronounced yellowish wash below and the more yellowish-green upper parts. The birds from the north coast of New Guinea are not as yellow below as the Jobi birds.

**Meliphaga analoga longirostris** (Ogilvie-Grant)

*Ptilotis longirostris* OGILVIE-GRANT, 1911, Bull. Brit. Ornith. Club, XXIX, p. 27: Wanuna Island, Aru Islands.

	MALE ADULT
Wing	82, 82, 84, 85
Tail	64, 68, 67, 68
Bill	16.5, . . , 17.5, 19

MATERIAL.—Aru Islands (Dobbo, Kobror, Wokan, Gebu-lengan), 5 males, 1 female.

RANGE.—Restricted to the Aru Islands.

REMARKS.—This is a slightly differentiated race, distinguished by the average longer bill. The present specimens, collected in 1900 and earlier, are very brownish in general coloration but this is probably due to "foxing."

**Meliphaga orientalis** (Meyer)

The bill is elongated and slender, upper parts olive-green, forehead gray or not gray, rump-tuft moderately dense, soft and gray, with a slightly darker brownish-gray subterminal band, rictal spot small, whitish yellow, auriculars yellow, dark area in face black to dusky olive, under parts rather dark gray, either almost unspotted, or with light edgings to the feathers giving a distinctly spotted appearance, inner edges of remiges yellowish white or buffy yellow, under wing-coverts yellowish white or buffy ochraceous.

The small size, slender elongated bill and dark color of the upper parts and under parts easily separate this species from the other forms, except some races of *gracilis*. Some races of *orientalis* may also be confused with *analoga*. The characters separating the *gracilis* forms from *orientalis* are given under the species discussion of *gracilis*. The race *orientalis* from southeast New Guinea, with its heavily spotted under parts, black area in the face, gray forehead, and ochraceous under wing-

coverts can be confused only with *mimikae*, from which it can be told at once by the smaller size and slender, elongated bill; *facialis* from north-west New Guinea is similar to *analoga* but may be distinguished by the average smaller size, more slender bill, darker under parts with a faint spotting, the more ochraceous under-wing and the less pronounced subterminal dark band in the rump-tuft; *becki* from northeast New Guinea, almost lacking the spotting below and without the ochraceous under-wing, is very similar to *analoga* but may be identified by the average smaller size, more slender bill, gray forehead, darker under parts with a faint spotting, and the less pronounced dark subterminal band on the rump-tuft.

***Meliphaga orientalis orientalis* (Meyer)**

*Ptilotis flavirictus orientalis* MEYER, 1894, Jour. f. Ornith., p. 92: Southeast New Guinea.

			ADULT MALE	ADULT FEMALE
Southeast New Guinea and the Hydrographers	Wing	(15)	73-79 (av. 75.8)	(16) 68-74 (av. 70.8)
	Tail	(13)	62-68 (av. 64.3)	(11) 58-64 (av. 60.5)
	Bill	(15)	15-17 (av. 15.5)	(16) 14-15-5 (av. 14.5)

**MATERIAL.**—Deva Deva and Mafulu, 14 males, 14 females; Aroa River, Owen Stanley, and Richardson Range, 3 males, 4 females, 3 sex ?; Hydrographer Range and head of the Mambare, 5 males, 7 females.

**DISTRIBUTION.**—Both the north and the south slopes of the mountains of southeast New Guinea; Archbold and Rand found it only at 1250 meters (Mafulu) and Hamlin at 770 meters (Deva Deva).

***Meliphaga orientalis facialis*, new subspecies**

**TYPE.**—No. 294338, American Museum Natural History; female adult, Siwi (Berge b. Siwi), Arfak Mts., New Guinea; April 29, 1928; E. Mayr.

**DIAGNOSIS.**—Differs from *orientalis* in having the upper parts citrine-green, not clear grayish-green forehead with very little gray, the circumocular area and postocular stripe dusky green, not black, the under parts less streaked, and the bill on the average slightly larger.

	MALE			FEMALE	
	Weyland Mts.	Snow Mts.		Weyland Mts.	Snow Mts. Arfak Mts.
Wing	79, 80	74	75	71, 72	71, 77, 78
Tail	63, 67	61	60	59, 59	57, 63, 62
Bill	16, 16	16	15	15, 15	15, 15, 15

**MATERIAL.**—Arfak (Siwi, Ditschi), 3 females, 1 sex ?; Weyland Mts. (Kunupi), 2 males, 1 female; Snow Mts., 1 male, 2 females.



DISTRIBUTION.—Apparently the mountains of western New Guinea, from the Snow Mountains to the Arfak Peninsula, recorded from 1200 to 1300 meters in the Weyland Mountains.

REMARKS.—This form is very distinct from *orientalis* of southeast New Guinea.

**Meliphaga orientalis becki**, new subspecies

TYPE.—No. 267970, American Museum Natural History; male ad.; Zakaheme, 4000 ft. (= 1219 meters), Huon Peninsula, New Guinea; April 5, 1929; R. H. Beck.

DIAGNOSIS.—Differs from both the other races of *orientalis* in the paler, yellowish-white not ochraceous underwing; differs from *orientalis* in the brighter green of the upper parts, the less yellowish-green edgings to the upper wing-coverts, the less intense black area about the eye and the postocular stripe which is more olive-tinged, the more restricted gray area of the forehead, the reduction of the light streaking in the under parts, giving a darker abdomen, and the lighter underwing. From *facialis* it differs in the darker green upper parts, the darker, more blackish area about the eye and the postocular stripe, the gray area on the forehead, the slightly darker gray underparts, and the lighter colored underwing.

	MALE		FEMALE	
	Wau (Morobe District)	Huon Peninsula	Wau (Morobe District)	Huon Peninsula
Wing	78, 78, 80, 80, 80, 80, 81, 81, 81	73, 75, 79	74, 75	71, 71, 72, 72, 73, 73, 74
Tail	66, 70, . . . , 70, 74, 67, 69	64, . . . , 67	62, 66	62, 63, . . . , 58, . . . , 62
Bill	14.5, 14, 15, 15, 14.5, 15, 15.5, 15	15.5, 16, 15.5	14, 14.5	14.5, 14.5, 14.5, . . . , 14, 14.5, 14

MATERIAL.—Zakaheme (Huon Peninsula), 1 male, 2 females; Junzaing (Huon Peninsula) 2 males, 6 females; Wau (Morobe District), 9 males, 3 females.

RANGE.—Apparently northeast New Guinea, from the Huon Peninsula to Mt. Misima, from 3500 to 4000 feet altitude.

REMARKS.—This race is intermediate between *orientalis* and *facialis*, being closer to *orientalis* in general color of the upper parts and the gray forehead, while it is closer to *facialis* in the reduction of streaking below. The character of the dark area in the face is intermediate. On the character of the lighter colored inner-edges of the remiges and under wing-coverts it is different from both the other races.

**Meliphaga gracilis** (Gould)

The bill is elongated, upper parts olive-green, forehead grayish or like back, rump-tuft soft and rather light, not edged with white, the

feathers gray with only a small, slightly darker brownish-gray subterminal band, rictal spot pale yellow and small, ear-coverts yellow, dark area in face dusky olive to black-tinged olive, under parts gray, washed with yellow, without a spotted appearance, inner webs of remiges yellowish white or tinged ochraceous, under wing-coverts yellowish white or buffy ochraceous.

Some of the races of *gracilis* approach very closely to *analoga* and to races of *orientalis*. The specific characters that can be used for separating *gracilis* from them appear to be the characters of the rump-tuft, and the slender bill, expanded laterally at the base. Other characters, peculiar to the different subspecies must be used in separating them from races of the other species. The two forms of *gracilis* occurring in Australia are easily distinguished from *notata*, the only other species of the group occurring there, by their much more slender bill and smaller size. *M. gracilis gracilis* from South New Guinea may always be distinguished from *analoga* by its smaller size, and from *orientalis* by its much lighter color above, the much paler, yellowish-washed under parts without an indication of streaking, the more slender bill and the lack of gray in the forehead.

On the south side of southeast New Guinea, *M. g. cinereifrons* may be distinguished from *analoga* of that area by its average smaller size, the slender bill, more laterally expanded at the base, the gray lores and forehead, and the buffy ochraceous under wing-coverts. From *orientalis* of southeast New Guinea it is easily distinguished by the lighter upper parts, the much paler under parts, entirely lacking spotting, and by having the bill much more expanded laterally at the base.

On the north side of southeast New Guinea, *M. g. stevensi* is distinguishable from *analoga* by its average smaller size, gray forehead, the more ochraceous under wing-coverts, and the bill being more laterally expanded at the base. *M. g. stevensi* differs from *M. orientalis* of the same area in the slightly shorter bill, which is more expanded at the base, the paler yellow auriculars, the more citrine, not olive-green outer edges of the remiges, the more ochraceous under wing-coverts the lighter colored under parts, and the paler gray rump-tuft more distinctly edged with white.

The two new races of *gracilis* from southeast New Guinea necessitate a concept of the species different from that held of the small, slender-billed very pale form of Cape York and South New Guinea. But that all these forms belong to the same species appears evident from the structure of the rump-tuft and bill. *M. gracilis* has always been con-

sidered a lowland species, so it is surprising to find the race *stevensi* up to 2500 feet in the mountains. Further, the fact that no *analoga* were collected in the Morobe District by Stevens, as a reëxamination of his material shows, who secured about twenty-eight specimens of this group, made me suspect that *stevensi* might be a representative of *analoga*, but such does not appear to be the case.

**Meliphaga gracilis gracilis** (Gould)

*Ptilotis gracilis* GOULD, 1866, Proc. Zool. Soc. London, p. 217: Cape York.

	MALE ADULT	FEMALE ADULT
Cape York		
Wing	73, 73, 75, 76, 77, 77	68, 69, 69, 69, 70, 72
Tail	.., 60, 60, 63, 60, 65	53, 58, 54, 53, .., 58
Bill	14.5, 15.5, 15.5, 15.5, 15.5, 16	14.5, .., 14.5, 15.5, 14, 15
South New Guinea		
Wing	71, 72.5, 73, 73, 75	67, 68, 69, 69, 70, 73
Tail	60, 59, 60, 60, 60	54, 53, 57, 59, 57, 59
Bill	15, 14.5, 13.5, 15, ..	14, 13.5, 14, 14, 14, 13.5
Aru Islands		
Wing	72, 74, 75, 76	74
Tail	57, 59, 60, 60	..
Bill	17, 16, 18, 16	15

**MATERIAL.**—Cape York, 2 males, 1 female, 4 sex ?; Cable Station, Cape York, 1 male, 1 female; Piara, Cape York, 1 female; Somerset, Cape York, 2 males; Patison Creek, Cape York, 2 males; Skull Creek, Cape York, 1 male, 3 females; Utingu, Cape York, 4 males, 7 females, 1 sex ?; Aru Islands (Wokam, Trangan, Kobror Islands), 5 males, 1 female; South New Guinea (Wuroi, Dogwa, Merauke), 6 males, 9 females.

**DISTRIBUTION.**—Cape York, Aru Islands and the lowlands of South New Guinea.

**REMARKS.**—The South New Guinea birds are very similar to the Cape York birds, differing chiefly in averaging slightly smaller and in having the under parts slightly darker. The Aru Island birds differ more from the Cape York birds in the somewhat darker under parts, the darker upper parts, the duller green outer edges of the remiges and the longer more slender bill. However, these differences are very slight.

**Meliphaga gracilis imitatrix** (Mathews)

*Ptilotis gracilis imitatrix* MATHEWS, 1912, Nov. Zool., XVIII, p. 403: Cairns. Type examined.

	MALE	FEMALE
Wing	74, 74, 75, 76, 76	69, 71, 72, 72
Tail	61, 59, 63, 61, 61	57, 59, 59, 60
Bill	.., 16.5, .., 16, 16.5	15, 15.5, 15.5, 15.5

MATERIAL.—Cairns, 2 males, 1 female, 1 sex ?; Kuranda, 2 males, 1 sex ?; Bartle Frere, 1 male; Barron River, 5 males, 1 sex ?; Johnstone River, 1 male.

DISTRIBUTION.—North Queensland in the vicinity of Cairns.

REMARKS.—Though Mathews did not recognize this race in his 'Systema Avium Australasianarum,' II, 1930, p. 770, it is a recognizable form, easily distinguished from *gracilis* by the much darker under parts, the darker upper parts and the more ochraceous, less yellowish under wing-coverts, especially near the bend of the wing. The geographical variation and distribution in Australia of these two forms is similar to that in *M. notata*.

***Meliphaga gracilis cinereifrons*, new subspecies**

TYPE.—No. 421327, American Museum Natural History; male ad.; Rona, Central Division, Territory of Papua; March 11, 1933; Richard Archbold and A. L. Rand.

DIAGNOSIS.—Differs from *gracilis* in having the lores and forehead grayish, not pure green, the under parts average slightly darker gray, the under wing-coverts more ochraceous, not yellowish, size larger, and bill longer, and though slender, more expanded laterally at the base.

	MALE	FEMALE
Wing	75, 76, 79, 80, 80, 81	71, 72, 73, 73
Tail	62, 63, 65, 63, 65, 65	58, 58, 59, ..
Bill	15, .., 15, 15.5, 17, 16	15, 13.5, 15, 15

MATERIAL.—Baroka, 1 male, 2 females, 1 sex ?; Nicura, 1 male; Port Moresby, 4 males; Rona, 2 males, 1 sex ?, 2 females; Orangerie Bay, 1 female; Samarai, 1 male; Papua, 1 male.

DISTRIBUTION.—Southeast New Guinea at least from the vicinity of Hall Sound to the eastern end of the Island, and up to 450 meters.

REMARKS.—This race is easily separated from *gracilis*, but it may be confused with the species *analoga*. The characters which separate it from that species are given under the species heading of *gracilis*.

***Meliphaga gracilis stevensi*, new subspecies**

TYPE.—No. 168055, Museum of Comparative Zoölogy; male ad.; Bielowat, Morobe District, Mandated Territory of New Guinea, altitude 2250 feet; May 27, 1932; H. Stevens.

DIAGNOSIS.—Similar to *cinereifrons* in size but with a slightly smaller bill; other-



wise differs in the general darker, more grayish under parts, the darker green upper parts with much darker gray on the lores and forehead, the more pronounced dark tips and centers of the feathers of the crown, giving a more scaled appearance, the slightly more extensive black on the side of the head, and the more pronounced white edge to the rump tuft.

	MALE	FEMALE
Wing	77, 78, 79, 80	72, 77
Tail	62, 66, 65, 67	.., 62
Bill	15, .., 16, 14	13.5, 14

MATERIAL.—Morobe, 4 males, 3 females; Hydrographer Range, 1 male; Kumusi River, 2 males, 1 female.

DISTRIBUTION.—Apparently the northern slopes of the northern side of southeast New Guinea up to 2500 feet (757 meters).

REMARKS.—The Kumusi River and Hydrographer Range specimens, collected in 1907 and 1918 have become so "foxed" that some of the subspecific characters are rather indistinct; possibly they show an approach toward *cinereifrons*.

#### **Meliphaga vicina** (Rothschild and Hartert)

*Ptilotis analoga vicina* ROTHSCILD AND HARTERT, 1912, Nov. Zool., XIX, p. 203: Sudest Island. Type examined.

This species has an elongated bill, extensively gray forehead, rump-tuft which is fairly soft, the feathers gray with a subterminal brownish-gray area and olive tips, face only slightly tinged with black, very small yellow rictal spot, auriculars yellow, not elongated, under parts fairly light gray, washed with yellowish especially on the abdomen, under wing-coverts buffy ochre, inner edges of remiges yellowish white.

The elongated bill, large size, gray forehead, yellow auriculars and soft rump-tuft serve to identify this distinct species.

	MALE ADULT	FEMALE ADULT
Wing	88, 90, 90, 91, 96	83, 84, 84, 84, 86
Tail	72, .., 72, 75, 79	68, .., 70, 71, 69
Bill	18.5, 18.5, 18, 19, 18	16, 16, 16, 15.5, 16

MATERIAL.—Sudest (= Tagula) Island, 9 males, 8 females.

DISTRIBUTION.—Sudest Island; one specimen from 2000 ft. (about 610 meters). It is the only form of this group known from the island.

REMARKS.—Paludan (*loc. cit.*, pp. 141-142) considered this form a race of *analoga*. It is certainly close to *analoga* but appears to be even more closely related to the new races of *gracilis* (*cinereifrons* and *stevensi*) from southeast New Guinea in the gray forehead, light rump-tuft and ochraceous under wing-coverts. But in this group in which most of the species differ so little from each other externally, it seems advisable to consider this very distinct form another species.

**Meliphaga flavirictus** (Salvadori)

*Ptilotis flavirictus* SALVADORI, 1880, Ann. Mus. Civ. Gen., XVI, p. 76: Fly River (type in Genoa, examined by Dr. Mayr in 1934).

This species has the bill somewhat smaller and more slender than in *analoga*, and straighter, curved only at the tip. In none of the specimens is the bill entirely black and in one specimen the mandible is light horn, maxilla horn-color except for the base of the culmen which is black. The forehead is light green, brighter than the back, which is yellowish green, rump-tuft medium, with a faint light edging, feathers gray with a darker, brownish-gray subterminal area. The rectal spot is conspicuously bright yellow, much brighter than the yellowish-white auriculars, the chin is strongly washed with yellow, more so than the under parts, the malar stripe is pale olive, but is rendered conspicuous by the brighter color above and below it, the dark area about the eye is only slightly blackish. The under parts are very pale gray, washed with yellowish. The under wing-coverts and inner edges of the remiges are rather bright yellowish white, the under wing-coverts almost without dusty centers.

The specimens from the south side of New Guinea are rather uniform, but a specimen from Upper Watut, Morobe District, while undoubtedly belonging to this species, is considerably darker green above, darker gray below, has the under wing-coverts less bright yellow, the dark area in the face much blacker, the auriculars more yellowish and bill blacker. Another specimen, with the head in poor condition appears to belong to this form. With such scanty material it is impossible to evaluate the significance of these differences.

	TYPE <sup>1</sup>	MALE	FEMALE	SEX?
Wing	79	77, 79, 80, 82	75	76, 79, 79
Tail	67	67, 68, 69, 71	64	63, 65, 65
Bill	..	13.5, 14, .., 14	13	14.5, .., 15

**MATERIAL.**—Snow Mountains, 1 male; Wuroi, 1 female; Kubuna, 1 male; Mafulu, 1 male; Mts. of Kotoi District, Brit. New Guinea, 3 sex ?; Upper Watut, Morobe District, 2 males.

**DISTRIBUTION.**—All the southern part of New Guinea from the Snow Mountains to southeast New Guinea, and the northern slope of southeast New Guinea; taken up to 1250 meters (Mafulu).

**REMARKS.**—Stresemann in his reviews of this group considered *flavirictus* a synonym of *analoga*, apparently on the authority of Hartert

<sup>1</sup> Measurements made by Dr. Mayr.

who examined the type. But *flavirictus* appears to be a distinct species; the specimens before me agree fairly well with the original description and Dr. Mayr, who has examined the type, is also of the opinion it is a good species.

